CAIT
Center for Advanced Infrastructure & Transportation
Rutgers, The State University of New Jersey

NJDOT Bureau of Research
QUARTERLY PROGRESS REPORT

Project Title:	Development of Airport Obstruction Identification System
RFP NUMBER:	NJDOT RESEARCH PROJECT MANAGER: Ed Kondrath
TASK ORDER NUMBER: 115 / 4-26857	PRINCIPAL INVESTIGATOR: Patrick Szary
Project Starting Date: : 01/1/2002 **Original** Project Ending Date: 12/31/2003 **Modified Completion Date:** 12/31/2005	Period Covered: 2nd Quarter 2005

Task	% of Total	% of Task this quarter	% of Task to date	% of Total Complete
1. Literature Search	10%	0%	100%	10%
2. Develop criteria	5%	0%	100%	5%
3. Evaluate the cost effectiveness	8%	0%	100%	8%
4. Conduct laboratory experiments	5%	0%	80%	4%
5. Conduct laboratory/field experiments	15%	0%	90%	13.5%
6. Develop prototype software	25%	0%	80%	20%
7. Demonstrate field test system	5%	50%	80%	4%
8. Redesign a new prototype	5%	25%	95%	4.75%
9. Demonstrate prototype system	5%	25%	70%	3.5%
10. Train NJDOT personnel	7%	0%	75%	5.25%
11. Final Report	10%	0%	40%	4%
TOTAL	100%			82%

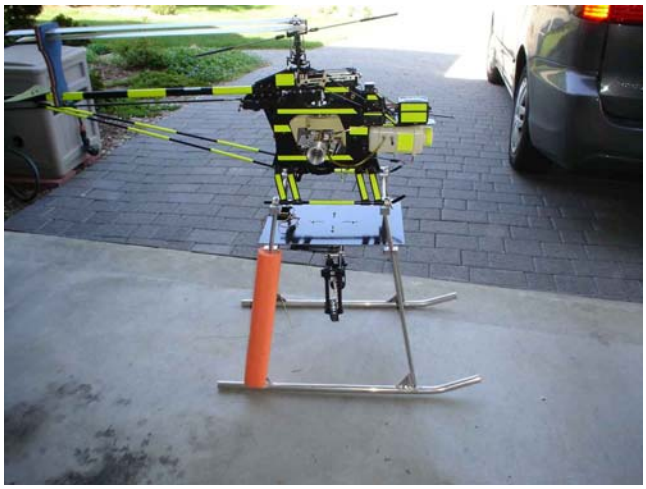
Project Objectives:
The objective of this research is to develop a prototype system for easily acquiring data either at fixed intervals or over time and generate a tree removal/trimming plan for discretized trees/tree areas. The areas could be identified using Global Position technology or produced using purchased aerial satellite photographs of the surrounding airport space.

Project Abstract:
The Division of Aeronautics is statutorily obligated to identify all obstructions to the approaches at the State's public use airports and heliports; and to have these obstructions removed. The first line of trees may be shadowing other obstructions that are not visible until the first line of trees is removed. Since tree removal/trimming often impacts surrounding landowners, multiple cuts or frequent removals are not desirable and in some jurisdictions are not feasible. The goal of this research is to provide the state with a device or methodology to identify a tree removal/trimming strategy for an annual cut where the trees surrounding the airport will remain within regulations.

1. Progress this quarter by task:

A. The progress on the Bergen Unit mount has progressed significantly. The mount for the unit has been completed (see pictures below). The unit is being prepared to be test flown; however, some small issues have arisen with the servos in the mount unit. More specifically, the servos controlling the tilt and pan are not functioning correctly. Chuck Wildey is currently in contact with the manufacturer to remedy the situation and it should be up and running within the next month.

B. Trainings have been halted temporarily until the unit has been completed. At that point, which is planned to be in July 2005, trainings can resume and the project can move toward completion.



2. Proposed activities for next quarter by task:
   A. The completion of the integration of the Bergen Industrial Twin and outfitting the unit with all the necessary components for testing.
   B. Test flying the helicopter at the chosen airport and sending acquired images to Oakland University for post processing and producing a detailed map.
   C. Continuation of work on the final report.

3. List of deliverables provided in this quarter by task (product date): n/a

4. Progress on Implementation and Training Activities:

5. Problems/Proposed Solutions:
The servo issue is currently being addressed and it should be remedied within the next month so the unit can be tested properly.

Total Project Budget	$210,000.00
Modified Contract Amount:	
Total Project Expenditure to date	$112,058
% of Total Project Budget Expended	53%

These are approximate expended amounts for the project; these estimates are for reference only and should not be used for official accounting purposes. For a more accurate project accounting please review the quarterly invoice for this project.